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ABSTRACT

This study is aimed at determining whether personalized pre-enrollment counseling based on the results of a standardized English skills test has a positive effect on new student enrollment, attrition (withdrawal), and success in reading skills courses. By comparing pertinent data for spring 1972 students who were not counseled with data for counseled students in spring 1973, it was found that counseled students had a lower attrition rate than other students in the reading skills classes. Counseling did not tend to increase the rate of enrollment in reading skills courses, nor did counseled reading skills students experience a higher rate of success. (MJK)

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THE EFFECTS OF PRESCRIBED TESTING AND PERSONALIZED COUNSELING ON ENROLLMENT, ATTRITION, AND SUCCESS OF NEW STUDENTS ENROLLED IN READING COURSES AT SACRAMENTO CITY COLLEGE

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PREFACE

The place of pre-enrollment testing in an "open-door" public community college needs to be examined closely. In fact, policies requiring the ACT or SAT prior to enrollment have already been eliminated in many two year colleges. The elimination of these tests has led to a void of pre-enrollment test information suitable for use by professional counselors in conjunction with new student orientation programs. More important, the place of a personal interview based on test results with in-coming students needs to be researched.

In spring 1973, the orientation program for in-coming students to Sacramento City College included for the first time a standardized English skills placement test (Educational Skills Test - College edition, McGraw-Hill, 1971). The students were told that the test was not being used to screen their admission to the college, but to give counselors some basis for making scheduling recommendations to students, particularly for English courses, prior to registration. Since the test was standardized and had established two year college norms, counselors could advise students whether they were ready for Freshman English or whether they should take one of the remedial English courses. Besides the test itself, another new aspect was that the testing procedure required of each new student a personal planning interview with a counselor - a practice not used for some time by the counseling staff. Since the student's performance on the test was to be rated in his presence by the counselor at the time of the interview, the opportunity for quick "feedback" was presented.

Because we were convinced that the personal counseling interview based on test results would positively affect enrollment, attrition, and achievement,

it was decided to do this study. Furthermore, there is evidence that although two year colleges are quick to innovate, they are lax in follow-up studies.

THE EFFECTS OF PRESCRIBED TESTING AND PERSONALIZED COUNSELING ON ENROLLMENT, ATTRITION, AND SUCCESS OF NEW STUDENTS ENROLLED IN READING COURSES AT SACRAMENTO CITY COLLEGE

This study is aimed at determining whether personalized counseling based on test results following the completion of a placement test has a positive effect on new student enrollment, attrition and success in reading skills courses. The primary finding of this study is the significant $p < .02$ chi-square (X^2) value for attrition. This finding strongly supports the positive effect of personalized counseling based on test results given to new students who enrolled in reading skills courses in spring 1973 (Hypothesis B). Hypothesis A, that students who enrolled in reading skills courses as a result of personalized counseling based on test results would enroll in reading skills courses at a higher rate than students not given such treatment, was rejected. Using a chi-square (X^2) 2 x 2 contingency table, the hypothesis was null. Hypothesis C, that students who enrolled in reading skills courses as a result of personalized counseling based on test results would experience a higher rate of success than students not given such treatment was also rejected - on the basis of a t-test. However, even though hypothesis C was null, there was a positive grade difference of .41 on a 4.0 scale (a low B grade for students, spring 1973; a C grade for students, spring 1972).

INTRODUCTION

Context of the Problem

In spring 1973, the orientation program for in-coming students to Sacramento City College included two new aspects: (1) a standardized English skills placement test (Educational Skills Test - Form A, College Edition, McGraw-Hill, 1971); and (2) a personal planning interview with a counselor at which the results of the test were interpreted.

The test was used to provide counselors with some basis for making scheduling recommendations to students, particularly for English courses. Since the test was standardized and had established two year college norms, counselors could advise students whether they were ready for Freshman English or whether they should take one of the remedial English courses. Furthermore, since each student's performance on the test was rated and interpreted by a counselor during a personal interview immediately following the test, the student received "feedback" prior to registration, at a time when he could make some sound decisions about courses.

Statement of the Problem

The purpose of this study is to determine whether the pre-enrollment personalized counseling based on the results of the Educational Skills Test given to new students had a positive effect on the enrollment, attrition, and successful completion of reading skills courses when compared with pre-enrollment group counseling with no test basis given to new students.

Review of Literature

A review of related literature showed that intensified counseling has an effect on student's performance in public junior colleges. A study by Moughamean (1969), for example, revealed that intensified counseling did significantly increase the graduation rate of students in public junior colleges. Brown (1955) also found significant differences when counseled and uncounseled students were compared. That students complain about lack of assistance from counselors in working through their academic motivational problems was substantiated by a study done by Kneoll and Medsker (1965).

Hypotheses

The following hypotheses were formulated:

(a) Ss who enrolled in reading skills courses as a result of personalized counseling based on test results will enroll in reading skills courses at a higher rate than Ss not given such treatment;

(b) Ss who enrolled in reading skills courses as a result of personalized counseling based on test results will experience a lower rate of attrition than Ss not given such treatment;

(c) Ss who enrolled in reading skills courses as a result of personalized counseling based on test results will experience a higher rate of success than Ss not given such treatment.

Rationale for the Hypotheses

The rationale was that students, having evidence of reading deficiency (test results) and having been made aware of it in a personal interview with a counselor where their tests were scored, interpreted, and compared with national junior college norms, would want to remedy this deficiency in order to succeed in English and other college courses. Therefore, it was expected that they would enroll in the reading skills courses in greater numbers. Furthermore, if they took the reading skills courses of their own volition, they would stay in the courses and would complete them successfully (grade of C or higher). Tuckman (Interchange, 1973) cited Pascal's study showing that student attitudes were more positive when the choice was left to them and it was substantiated for this study that there was little or no effort on the part of the counselors to pressure students into reading skills courses.

Operational Definitions of the Variables

Educational Skills Test - Form A, College Edition, McGraw-Hill, 1971 with two-year college norms.

Personalized Counseling - The process in which a new student was given the opportunity to see a counselor on a one-to-one basis to discuss his goals and to plan his semester program.

Group Counseling - The process in which new students met with one counselor in groups of ten for orientation purposes.

New Students - students who had not attended college previously and who were enrolling in Sacramento City College for the first time.

Enrollment - The students identified from college records and instructors' grade sheets as new students enrolled in the reading skills courses.

Attrition - withdrawal prior to the final examination period in accordance with college regulations.

Success - a final grade of "C" or better in a reading skills course.

Reading Skills Course - English B (Basic Reading Skills) and English 71 (Developmental Reading).

Operational Re-Statement of the Hypotheses

Since the new students who enrolled in the reading skills courses in spring 1973 had a personal interview prior to registration with a counselor who interpreted the test results immediately following its completion, it was expected that there would be an increase in the number of new students enrolled in the reading skills courses when compared with spring 1972. It was also expected that attrition would be lower and the success rate would be higher when compared with spring 1972.

Significance of the Study

It was hoped that this study would answer some of the questions which teachers and counselors have about prescribed placement testing and the value of a prescribed personal counseling session for new students during orientation. Sacramento City College has committed its staff and resources to placement testing and personal counseling. Have the results, therefore, merited the continuance of the process?

METHOD

Subjects - Ss were two groups of new students attending a public "open door" comprehensive community college who enrolled in the reading skills courses. The group which enrolled in spring 1973 had taken a prescribed Educational Skills Test and had a prescribed personal interview with a counselor immediately following the completion of the test, for purposes of interpretation and advising, prior to registration. The group which enrolled in spring 1972 had no prescribed test and no personal interview with a counselor prior to enrollment. Both groups were searched out from college and instructors' records and identified for this study as new students. Although the basis for selection of the reading skills courses was not the same for both groups, it was known that both groups, once enrolled in the reading skills courses, were given the Nelson-Denny Reading Test. Those scoring below the 35th percentile were assigned by the reading instructors to English B and those scoring above the 35th percentile were assigned by the reading instructors to English 71. Both groups then experienced the same reading program, the same battery of pre and post progress tests, the same grading standards, the same instructors, the same classroom environment (the reading laboratory) and the same final examination.

Independent Variable

Prescribed Placement Test with Prescribed Personal Interview with a Counselor. The experimental group enrolled in the reading skills courses after the subjects had taken the prescribed Educational Skills Test and

after they had a prescribed personal interview with a counselor immediately following the test. All of this group scored below the 50th percentile on the Educational Skills Test (50th being the cut-off for college transfer English courses as based on the national junior college norms for the test.) Those scoring at the 25th percentile or below were advised to take English B (Basic Reading Skills) and those scoring above the 25th percentile were advised to take English 71 (Developmental Reading), if they chose to take an English course. The control group enrolled in the reading skills courses with no test basis and no personal interview with a counselor. This group had group counseling only, prior to registration.

Dependent Variables

Enrollment - The dependent variable, higher rate of enrollment, was determined by examining instructors' and college records to find out which of the new students enrolled in the reading skills courses in spring 1972 and 1973. It was expected that the enrollment of the experimental group would be higher.

Attrition - After final grade sheets were submitted by the instructors, the attrition of the experimental group was compared with that of the control group. It was expected that the attrition (withdrawal) of the experimental group would be lower.

Success - After final grades were computed, the mean grade point of the experimental group was determined and compared with the mean grade point of the control group. It was expected that the mean G.P.A. of the experimental group would be higher.

Procedures

In spring 1973, the orientation program for in-coming students to Sacramento City College included for the first time a standardized English skills placement test. The students were told that the test was not to be used to screen their admission to the college, but to give counselors some basis for making scheduling recommendations, particularly for English courses, prior to registration. Since the test was standardized and had established two-year college norms, counselors would be in a position to advise students whether they were ready for Freshman English or whether they should take one of the remedial English courses. The test was given on five separate days during the week set aside for orientation, the week prior to registration, and was administered to 726 students. It was conducted by one counselor, a specialist in testing, assisted by four to five proctors, members of the English department or the counseling staff. The test took one hour and fifteen minutes and consisted of five parts: three parts tested reading comprehension; one part tested understanding of mechanics of writing; one part tested ability to organize and outline. On completion of the test, the materials were collected by proctors and sent to the counseling center. The students were then directed to the counseling center where appointments were scheduled on an individual basis with counselors for scoring and interpretation.

Due to the "ex post fact" nature of this study, a true experimental design was not possible. The design was rather a criterion design, C being the type of counseling and X being the test and the interpretation of the test, while O represented the dependent variables: enrollment, attrition, and success.

The study relied only on a criterion group design and it was obviously limited. The procedural design of the study did not attempt to deal with the cause and effect relationships in any great detail.

$$\begin{array}{cccccc} C & X & O & , & O & , & O \\ 1 & & 1 & & 3 & & 5 \end{array}$$

$$\begin{array}{cccccc} C & & O & , & O & , & O \\ 2 & & 2 & & 4 & & 6 \end{array}$$

Data Analysis

A Chi-Square (X^2) Test was used to analyze the variance between the experiemental and the control groups on attrition and enrollment.

A t test was used to analyze the comparative success of the experimental and the control groups.

SUMMARY OF RESULTS

Hypothesis A

The hypothesis that S_s who enrolled in reading skills courses as a result of personalized counseling based on test results will enroll in reading skills courses at a higher rate than S_s not given such treatment was tested using a chi square (X^2), 2 x 2 contingency table (two independent samples). The X^2 value 1.11 (two-tailed test) led to the conclusion that there was little or no relationship between counseling based on test results and increased enrollment of new students in the reading skills courses when compared with a group not given personalized counseling based on test results. The analysis is shown in Table A_1.

TABLE A_1

Hypothesis A

	Total Enrollment in Reading Skills Courses		Enrollment of New Students in Reading Skills Courses	
Spring 1973 A	520	B	69	A + B = 589
Spring 1972 C	498	D	55	C + D = 553
	A + C = 1018		B + D = 124	N = 1142

$X^2 = 1.11$, $p > .20$ (df=1) - No Statistical Significance

Steps to determine X^2 (Chi Square):

1. (A+B) (C+D) (A+C) (B+D) = 41, 115, 908, 344
2. A x D = 28,600
3. B x C = 34,362
4. Step 2 - Step 3 = -5762
5. Step 4 - $\frac{N}{2}$ = 6333
6. (Step 5)^2 = 40,106,889
7. N x Step 6 = 45,802,067,238
8. Step 7 ÷ Step 1 = X^2 = 1.11

   df = 1

   p = > .20 . (Tuckman, Appendix B, Table VII, p. 370).

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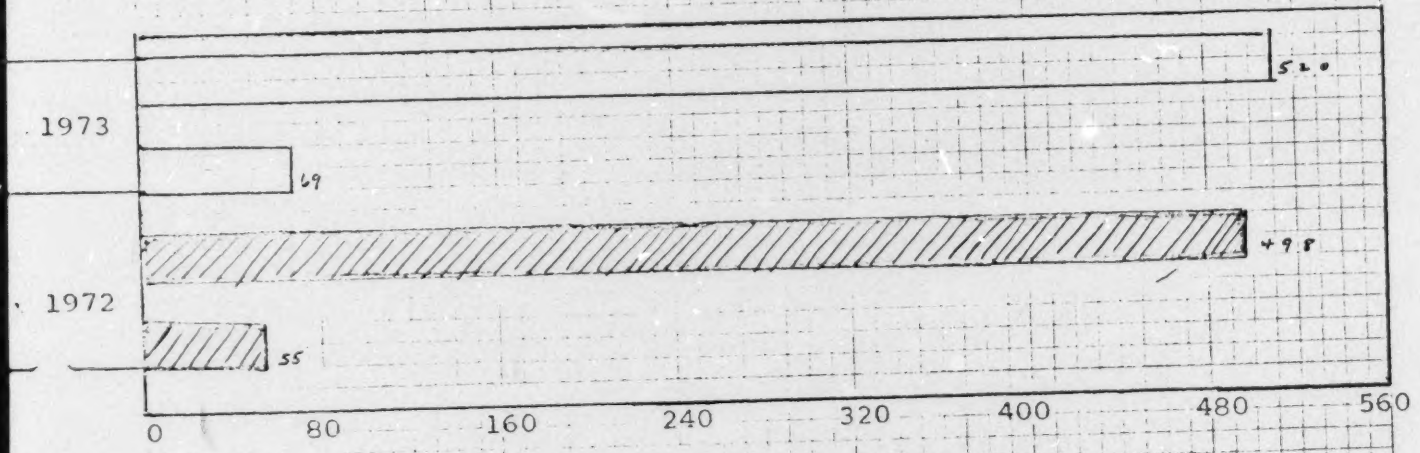
TABLE A_2

ENROLLMENT IN READING SKILLS CLASSES

HYPOTHESIS A

Key: Each square = 10
Shaded area = new students 1972
Light area = new students 1973



Hypothesis B

The hypothesis that S_s who enrolled in reading skills courses as a result of personalized counseling based on test results will experience a lower rate of attrition than S_s not given such treatment was tested using a chi-square (X^2), 2 x 2 contingency table (two independent samples). The X^2 value of 5.62 and its corresponding p value$<.02$, df=1 (two-tailed test) leads to the conclusion that students who enrolled in reading skills courses as a result of personalized counsling based on test results did experience a significantly lower rate of attrition than students who were not given such treatment. The analysis is shown in Table B_1.

TABLE B_1

Hypothesis B

	New Student Enrollment	New Student Attrition	
Spring 1973 A	69	C 6	A + B = 75
Spring 1973 B	55	D 14	C + D = 69
	A + B = 124	C + D = 20	N = 144

$X^2 = 5.62$, $p < .02$ (df=1)

Steps to determine X^2 (Chi Square):

1. (A+B) C+D) (A+C) (B+D) = 12,834,000
2. A x D = 966
3. B x C = 330
4. Step 2 - Step 3 = 636
5. Step 4 - $\frac{N}{2}$ = 564
6. $(\text{Step } 5)^2$ = 501,264
7. N x Step 6 = 72,193,616
8. Step 7 ÷ Step 1 = X^2 = 5.62

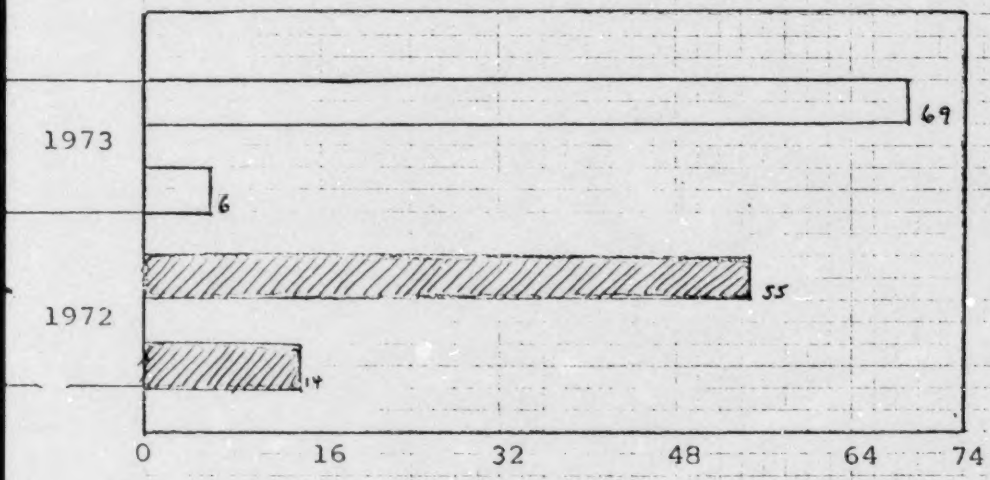
df = 1

p = <.02 (Tuckman, Appendix B, Table VII, p. 378)

TABLE B_2

HYPOTHESIS B -ATTRITION

Key : Each square = 2
Shaded area = new students, 1972
Light area = new students, 1973



Hypothesis C

The hypothesis that S_s who enrolled in reading skills courses as a result of personalized counseling based on test results will experience a higher rate of success than S_s not given such treatment proved to have no statistical significance when a t-test was run. The analysis is shown on Table C_1, followed by a graph, Table C_2.

Steps to determine t-Test value:

Group	1	2
N=	63	41
ΣX=	201	114
ΣX^2=	40401	12996
$\bar{X}$ =	3.19	2.78

t = .09, df = 102 - No Statistical Significance

1. Group Variances

   S_1^2 = 641.28

   S_2^2 = 316.97

2. t-value

   1. $$\frac{(N_1-1)\ S_1^2 + (N_2-1)\ S_2^2}{N_1 + N_2 - 2} = 514.09$$

   2. $$\frac{N_1 + N_2}{N_1 N_2} = .04$$

   3. (Step 1 x Step 2) = 20.56

4. $\sqrt{\text{Step 3}} = 4.54$

5. $\bar{X}_1 - \bar{X}_2 = .41$

6. $t = \frac{\text{Step 5}}{\text{Step 4}} = .09$

$df = N_1 + N_2 - 2 = 102$

TABLE C_1

	A	B	C	D	F	Withdrawal	$\bar{X}$
Spring 1972 (55 new students)	8	23	6	1	3	14	2.78

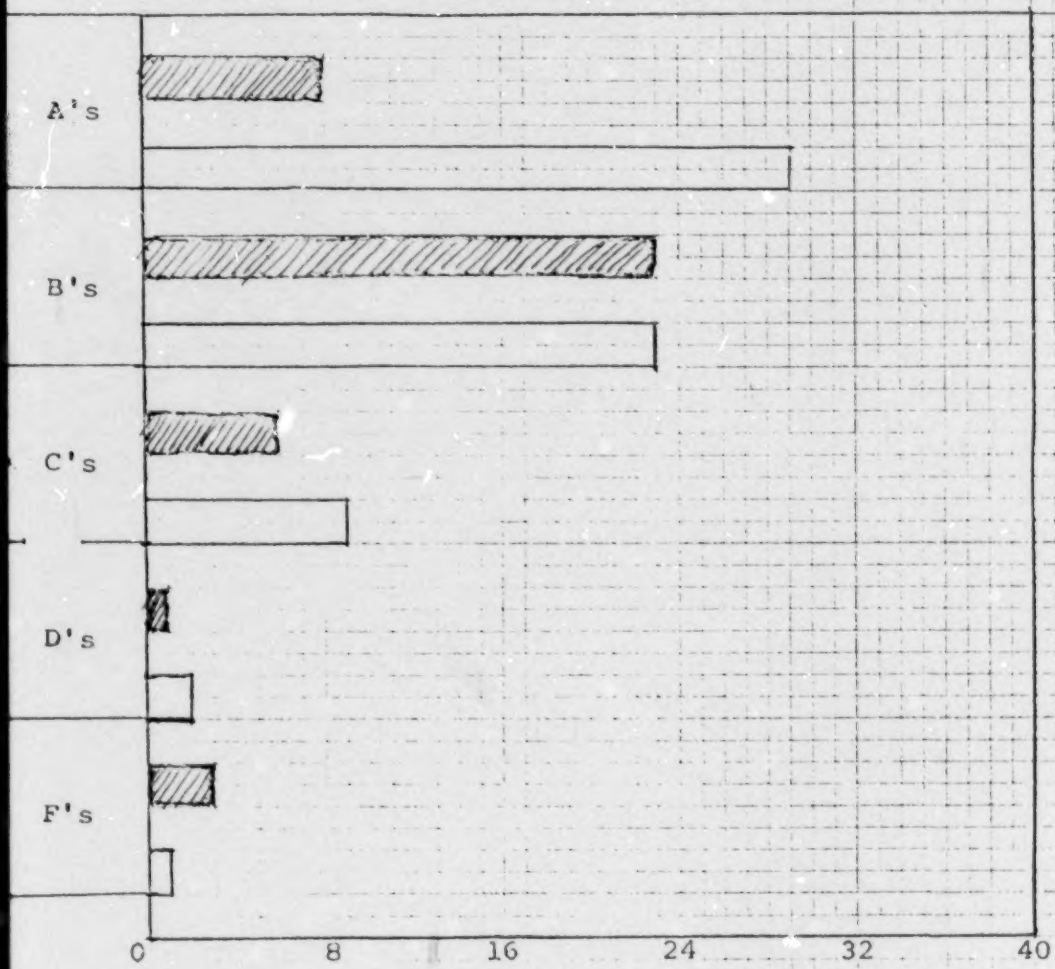
	A	B	C	D	F	Withdrawal	$\bar{X}$
Spring 1973 (69 new students)	28	23	9	2	1	6	3.19

Although the reading program, grading procedures, and instructors were the same, it is interesting to note the difference in the number of A grades when spring 73 is compared with spring 72. (See Table C_1) Furthermore, the rate of achievement for new students in Spring 1973, although it is not significantly different in terms of the t-value, the ,41 mean difference is one grade higher than in 1972, B for 1973 and C for 1972. (See Table C_2).

TABLE Q_2

DISTRIBUTION OF GRADES

Key: Each square = 1
Shaded area = new students 1972
Light area = new students 1973



The fact that Hypotheses A and C--the enrollment and achievement of new students in the reading skills courses as a result of personalized counseling based on test results--proved to be of no significance statistically may be attributed to: (a) the majority of the students tested who were not eligible for English 1A (73.29 percent) did not take an English course; (b) many of these students did not enroll in any course.

Since Hypothesis B--that the rate of attrition of new students who enrolled in the reading skills courses as a result of personalized counseling based on test results--proved true statistically may be evidence enough to support the continuance of placement testing followed by a personal interview with a counselor based on test results, at least until further studies are done using either the same design with a larger group over a longer period of time or using a true experimental design and randomization.

The study, besides providing information to the writers who represent instruction, administration, and counseling, as well as to the English department and counseling staff, is one of the very few follow-up studies done at Sacramento City College addressing the problem of placement testing and counseling and its subsequent effects on students.

Discussion

The findings in this experiment have led to the following conclusions:

1. Contrary to what was hypothesized, personalized counseling based on test results had little or no effect on the total student enrollment in the reading skills courses.

2. As hypothesized, personalized counseling based on test results had a significant positive effect on the attrition of new students enrolled in the reading skills courses.

3. Contrary to what was hypothesized, personalized counseling based on test results had no significant statistical effect on the achievement (grade point average) of new students enrolled in the reading skills courses. Despite the fact that hypothesis A and C proved to be null, the study contradicted the report by Bossone (1966) that 40-60 percent of those students who enrolled in remedial English classes in California public junior colleges earned a grade of D or F. Of the 69 new students who enrolled in the reading skills courses in spring 1973 only 2 received a grade of D and only 1 received a grade of F. In like manner, of the 55 new students who enrolled in the reading skills courses in spring 1972, only 1 received a grade of D and 3 received a grade of F. (See Table 5.)

4. The study of prescribed new student orientation based on test results should be continued and conducted over a longer period of time. The design of this study will be continued with new students in fall 1973, and spring 1974. These two groups will provide a much larger group and the basis for conclusions will have a broader implication.

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